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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,696	11/21/2003	Jorge Vicente Blasco Claret	2760-1-003	1346
7590 KLAUBER & JACKSON 4th Floor 411 Hackensack Avenue Hackensack, NJ 07601		03/05/2008	EXAMINER PEREZ, JAMES M	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 03/05/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/719,696		BLASCO CLARET ET AL.	
	Examiner		Art Unit	
	JAMES M. PEREZ		2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 9 is/are rejected.
- 7) ☒ Claim(s) 4-8 and 10-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/21/2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/19/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

Priority

1. Applicant's claim for the benefit as a Continuation of United States Patent Number (USPN) 6,711,901 is acknowledged. The currently application does not comply with the requirements for claiming priority as a Continuation as stated in MPEP § 201.07. Specifically, the currently application does not contain the same disclosure as USPN 6,711,901 or have any of the inventors as USPN 6,711,901. Therefore the priority date of USPN 6,711,901 (January 21, 2000) is not granted to the currently application 10/719,696.

2. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(a)-(d) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has complied with all of the conditions for receiving the benefit of an earlier filing date under 35 U.S.C.119(a)-(d), therefore the current application 10/719,696 will be granted the priority date of May 23, 2001.

Specification Objections

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The Abstract should be **in narrative form** and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. **The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided.** The

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abstract should describe the disclosure sufficiently to assist reader in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Drawings

The drawings are objected to for the following informalities:

(1) the drawings are objected to because black boxes are used in Figs. 1-2 and 4-5 which convey no meaning. Each black box should be descriptively labeled (with either well-known symbols, words or abbreviations applicable to each device) to facilitate an understanding of the figure and how they are related to the claims. The drawings should be more descriptively labeled as indicated by 37 CFR 1.84(g).

Correction is required.

Applicant is required to submit a proposed drawing correction in response to this Office Action. However, correction of the noted defect can be deferred until the application is allowed by the Examiner.

Claim Objections

Claims 1-13 are objected for the following informalities:

(1) With regards to claims 1-13: the capitalized letters at the beginning of each claim should be changed to lower case letters to comply with current USPTO acceptable practice. Appropriate correction is required.

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(2) With regards to claims 1-13: these claims prove for the use of synchronization of communication involving multiple user equipments with a head-end equipment by means of OFDM modulation, it is unclear what method/process the applicant is intending to encompass. A claim merely recites a use without any active, positive steps delimited how this use is actually practiced.

(3) Claim 1 line 1: term "process" should be replaced with "A process."

(4) Claim 2 line 1: the term "process" should be replaced with "The process."

The same is true for claims 3-13.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidl et al. (USPN 5,732,113) in view of Knutson (USPN 6,470,005) in further view of McFarland (USPN 6,807,146).

With regards to claim 1, Schmidl teaches a process for synchronization of communication involving multiple user equipments with a head-end equipment by means of OFDM modulation (col. 11, lines 32-34: broadcast transmission of digital TV

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using OFDM signals) in upstream channel, including means to add and extract a cyclic prefix (col. 2, lines 35-50 and col. 4, lines 56-45) from OFDM symbols in order to avoid intersymbol interferences (ISI) (col. 2, lines 35-50 and col. 4, lines 56-45), and in which a synchronization in frequency and time is carried out in a downstream channel, determined by the communication from the head-end equipment with the user equipments by means of sending synchronization sequences (col. 11, lines 60-67, OFDM training sequence included in the OFDM signal s transmitted to a receiver within a data frame to proved timing and frequency synchronization); said Process for Synchronization of Communication comprising:

frequency synchronization by means of correcting a sampling frequency in the multiple user equipments (col. 19, lines 51-61 and col. 9, lines 20-50, and col. 5, lines 35-67) from an estimation carried out in the frequency synchronization in the downstream channel (col. 19, lines 51-61 and col. 9, lines 20-50, and col. 5, lines 35-67);

Schmidl does not explicitly teach two limitations: Limitation 1) pre-compensation, in the user equipments, of a rotation that various carriers suffer on being sent in the upstream channel from an estimation of the rotation suffered by the carriers in the downstream channel, avoiding corrections in reception in the upstream channel by the head-end equipment; Limitation 2) said upstream channel is applicable to two-way communication over the electricity network; time synchronization by means of an estimation, carried out by the user equipments and the head-end equipment, of a moment when the OFDM symbols are sent to the head-end, in order to make the head-

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end receive the OFDM symbols in previously fixed moments of time; and interrogate the user equipments by means of assignment by the head-end of intervals selected from: time intervals, frequency intervals, and combinations thereof in the upstream channel, slots, divided in fragments for the interrogation of the user equipments where the user equipments reply to the head-end if and only if user equipments intend to access the upstream channel; from which the head-end equipment distributes the upstream channel between petitions received and sends said distribution to the user equipments in order to make the user equipments transmit without collisions.

Limitation 1)

Knutson teaches pre-compensation, in the user equipments (col. 3, line 65 through col. 4, line 11 and col. 4, lines 31-37: OFDM and DMT), of a rotation that various carriers suffer on being sent in the upstream channel from an estimation of the rotation suffered by the carriers in the downstream channel (col. 3, line 65 through col. 4, line 11), avoiding corrections in reception in the upstream channel by the head-end equipment (col. 3, line 65 through col. 4, line 11);

Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to combine the OFDM communication system of Schmidl with the OFDM communication system of Knutson in order to create an improved OFDM communication system with increased acquisition by the base unit and also decreases the complexity of the base unit (col. 4, lines 7-11).

Limitation 2)

McFarland teaches said upstream channel is applicable to two-way communication over the electricity network (col. 1, lines 59-68: telephone modem and OFDM);

time synchronization by means of an estimation (col. 16, line 48 through col. 17, line 30), carried out by the user equipments and the head-end equipment, of a moment when the OFDM symbols (col. 4, lines 30-38 and lines 55-65) are sent to the head-end, in order to make the head-end receive the OFDM symbols in previously fixed moments of time (col. 16, line 48 through col. 17, line 30);

interrogate the user equipments by means of assignation by the head-end of intervals selected from (fig. 6: col. 11, line 44 through col. 12, line 8): time intervals, frequency intervals, and combinations thereof in the upstream channel, slots, divided in fragments for the interrogation of the user equipments where the user equipments (fig. 6: col. 11, line 20 through col. 12, line 8) reply to the head-end if and only if user equipments intend to access the upstream channel (col. 15, lines 1-25); from which the head-end equipment distributes the upstream channel between petitions received and sends said distribution to the user equipments in order to make the user equipments transmit without collisions (fig. 6: col. 2, line 65 through col. 3, line 11; col. 11, lines 58 through col. 12, line 9; col. 15, lines 24-32; and col. 16, lines 58-67).

Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to combine the OFDM communication system of Schmidl with the OFDM communication system of McFarland in order to create an improved multi-carrier OFDM

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communication system which has less expense, increased efficiency, and increased quality of service (McFarland: col. 4, line 30 through col. 5, line 11).

With regards to claim 9, Schmidl in view of Knutson in further view of McFarland teaches the limitations of claim 1.

Schmidl does not explicitly teach that the head-end equipment assigns interrogation slots, divided in fragments by means of sending SAM messages to the various user equipments, said user equipment, in the case where they need to transmit, transmitting a POLLING symbol in the assigned fragments, in order to make the head-end equipment determine which user equipment intends to transmit information and optimises the distribution algorithms of the upstream channel between the user equipments.

McFarland teaches the head-end equipment assigns interrogation slots, divided in fragments by means of sending SAM messages to the various user equipments (col. 15, lines 17-23), said user equipment, in the case where they need to transmit (col. 15, lines 10-13), transmitting a POLLING symbol in the assigned fragments (col. 15, lines 10-13), in order to make the head-end equipment determine which user equipment intends to transmit information (col. 15, lines 10-23) and optimises the distribution algorithms of the upstream channel between the user equipments (col. 15, lines 17-23).

Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to combine the OFDM communication system of Schmidl with the OFDM communication system of McFarland in order to create an improved multi-carrier OFDM

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communication system which has less expense, increased efficiency, and increased quality of service (McFarland: col. 4, line 30 through col. 5, line 11).

5. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidl et al. (USPN 5,732,113) in view of Knutson (USPN 6,470,005) in further view of McFarland (USPN 6,807,146) with Fu (USPN 7,203,718).

With regards to claim 2, Schmidl in view of Knutson in further view of McFarland teaches the limitations of claim 1.

Schmidl does not explicitly teach the use of equal oscillators to generate the transmission and reception sampling frequencies both in the head-end equipment and the user equipments, in order to make frequency error in the upstream channel proportional to frequency error in the downstream channel and to carry out synchronization in frequency in the upstream channel at the same time that synchronization in frequency in the downstream channel.

Fu teaches the use of equal oscillators (col. 2, lines 28-32) to generate the transmission and reception sampling frequencies both in the head-end equipment and the user equipments (col. 2, lines 38-41), in order to make frequency error in the upstream channel proportional to frequency error in the downstream channel (col. 2, lines 28-41) and to carry out synchronization in frequency in the upstream channel at the same time that synchronization in frequency in the downstream channel (col. 2, lines 28-41).

Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to combine the OFDM communication system of Schmidl with the OFDM with the sampling/synchronization method disclosed in Fu in order to create an improved system and method for minimizing sampling errors at both receivers of the communications network (Fu: col. 2, lines 28-41).

With regards to claim 3, Schmidl in view of Knutson in further view of McFarland with Fu teaches the limitations of claim 2.

Schmidl does not explicitly teach the pre-compensation (col. 3, line 65 through col. 4, line 11 and col. 4, lines 31-37: OFDM and DMT) of the rotation carried out in the user equipments is accomplished by means of a rotor included in the transmitter (col. 3, line 65 through col. 4, line 11 and col. 4, lines 31-37: OFDM and DMT), estimated from the estimation carried out in each one of the carriers of the received signals in the downstream channel in the user equipment, avoiding rotation correction of the signal received from the various user equipments in the head-end equipment.

Knutson teaches the pre-compensation (col. 3, line 65 through col. 4, line 11 and col. 4, lines 31-37: OFDM and DMT) of the rotation carried out in the user equipments is accomplished by means of a rotor included in the transmitter (col. 3, line 65 through col. 4, line 11 and col. 4, lines 31-37: OFDM and DMT), estimated from the estimation carried out in each one of the carriers (col. 2, lines 35-62; col. 3, line 65 through col. 4, line 11 and col. 4, lines 31-37: OFDM and DMT) of the received signals in the downstream channel in the user equipment, avoiding rotation correction of the signal

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received from the various user equipments in the head-end equipment (col. 3, line 65 through col. 4, line 11 and col. 4, lines 31-37: OFDM and DMT).

Therefore it would be obvious to one of ordinary skill in the art at the time of the invention to combine the OFDM communication system of Schmidl with the OFDM communication system of Knutson in order to create an improved OFDM communication system with increased acquisition by the base unit and also decreases the complexity of the base unit (col. 4, lines 7-11).

Allowable Subject Matter

6. Claims 2-8 and 10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

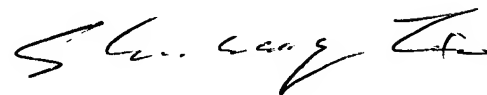
Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES M. PEREZ whose telephone number is (571)270-3231. The examiner can normally be reached on Monday through Friday: 9am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP
3/3/2008



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